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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/714,076	11/14/2003	Vikrant Kasarabada	18602-08156	2632
61520	7590	02/15/2008		
APPLE/FENWICK SILICON VALLEY CENTER 801 CALIFORNIA STREET MOUNTAIN VIEW, CA 94041			EXAMINER CZEKAJ, DAVID J	
			ART UNIT 2621	PAPER NUMBER
			MAIL DATE 02/15/2008	DELIVERY MODE PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.



<b>Office Action Summary</b>	Application No.	Applicant(s)	
	10/714,076	KASARABADA ET AL.	
	Examiner	Art Unit	
	Dave Czekaj	2621	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-58 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-58 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 14 November 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some    \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |   |  |
|---|--|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. ____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date <u>2/7/05</u> . | 6) <input type="checkbox"/> Other: ____  |



***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

1. Claims 1-58 are rejected under 35 U.S.C. 103(a) as being unpatentable over Koda (6408030) in view of Sethuraman (6563549), (hereinafter referred to as "Seth").

Regarding claim 1, Koda discloses an apparatus that relates to a scene change point detecting method (Koda: column 1, lines 9-11). This apparatus comprises "receiving macroblocks for an uncompressed image" (Koda: figure 1, wherein the uncompressed picture buffer has the uncompressed image), "determining a macroblock type for each block" (Koda: column 7, lines 50-60), and "determining whether the image represents a scene change from a distribution of block types" (Koda: column 8, lines 40-60). However, this apparatus lacks encoding the image in response to determine a scene change and the frame type. Seth teaches that prior art encoding systems for detecting scene changes impact the rate control behavior of the encoder (Seth: column 1, line 64 – column 2, line 5). To help alleviate this problem, Seth discloses "encoding the image in response to the determination of a scene change and the type of frame" (Seth: figure 4). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to take the apparatus disclosed by Koda and add the processing taught by Seth in order to



obtain an apparatus that limits the impact on the rate control algorithm of the encoder.

Regarding claim 2, Koda discloses "identifying the scene change in response to a percentage of prediction blocks in the image" (Koda: column 8, lines 40-60. By knowing the number of blocks and the size of the frame, a percentage is easily obtained).

Regarding claim 3, Koda discloses "responsive to the image being a forward predicted frame type, determining a percentage of intra-coded macroblocks and identifying a scene change at the image" (Koda: column 8, lines 53-65).

Regarding claim 4, Koda discloses "responsive to the percentage of blocks exceeding a threshold, identifying a scene change" (Koda: column 8, lines 7-11).

Regarding claim 5, Koda discloses "the threshold is about .65" (Koda: column 8, lines 7-11. While Koda fails to explicitly show the threshold being .65, Koda does disclose setting threshold values to judge a scene change. The examiner notes that it would have been obvious to set the threshold at a value indicating over half of the blocks, such as .65, in order to successfully determine a scene change).

Regarding claim 6, Koda discloses "the image being a bidirectionally predicted frame, determining a percentage of backward predicted blocks and identifying a scene change" (Koda: column 8, lines 46-53).



Regarding claim 7, Koda discloses "responsive to the backward predicted blocks exceeding a threshold, identifying a scene change" (Koda: column 8, lines 46-53).

Regarding claim 8, Koda discloses "the threshold is about .7" (Koda: column 8, lines 7-11. While Koda fails to explicitly show the threshold being .7, Koda does disclose setting threshold values to judge a scene change. The examiner notes that it would have been obvious to set the threshold at a value indicating over half of the blocks, such as .7, in order to successfully determine a scene change).

Regarding claim 9, Koda discloses "the image being a bidirectionally predicted frame, determining a percentage of forward predicted blocks and identifying a scene change" (Koda: column 8, lines 46-53).

Regarding claim 10, Koda discloses "responsive to the forward predicted blocks exceeding a threshold, identifying a scene change" (Koda: column 8, lines 46-53).

Regarding claim 11, note the examiners rejection for claim 8.

Regarding claim 12, note the examiners rejections for claims 3, 6, and 9.

Regarding claim 13, Seth discloses "wherein encoding the image comprises increasing a number of bits used to encode the image" (Seth: column 3, lines 65-67, wherein the adjustment of the quantization parameter would increase the number of bits).



Regarding claim 14, Seth discloses "encoding the image comprises changing a quantization rate used to quantize the image" (Seth: column 3, lines 65-67).

Regarding claim 15, although not disclosed, it would have been obvious to increase a counter indicating a number of bits available for a remaining set of images (Official Notice). Doing so would have been obvious in order to help correctly determine how many image samples are left.

Regarding claim 16, although not disclosed, it would have been obvious to increase a counter indicating a number of bits allocated to images having the same frame type (Official Notice). Doing so would have been obvious in order to help easily determine how many frames are of the same type.

Regarding claim 17, although not disclosed, it would have been obvious to store generated information in a side information file (Official Notice). Doing so would have been obvious in order to allow quick access to the information.

Regarding claims 18-34, note the examiners rejections for claims 1-17.

Regarding claims 35-51, note the examiners rejections for claims 1-17.

Regarding claim 52, note the examiners rejection for claim 1.

Regarding claims 53-58, note the examiners rejections for claims 53-58.

### ***Conclusion***

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure:

US-6233278

05-2001

Dieterich



US-7092040	08-2006	Watanabe
US-6351493	02-2002	Reed et al.
US-5731835	03-1998	Kuchibholta
US-5642174	06-1997	Kazui et al.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dave Czekaj whose telephone number is (571) 272-7327. The examiner can normally be reached on Mon-Thurs and every other Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mehrdad Dastouri can be reached on (571) 272-7418. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



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Art Unit: 2621

  
Dave Czekaj

TC 2600

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